JUNE • 1960

FIREMEN

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Night Rescue

(see page 9)

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RUSSIAN FIREMEN AND THEIR FIRES - - page 12

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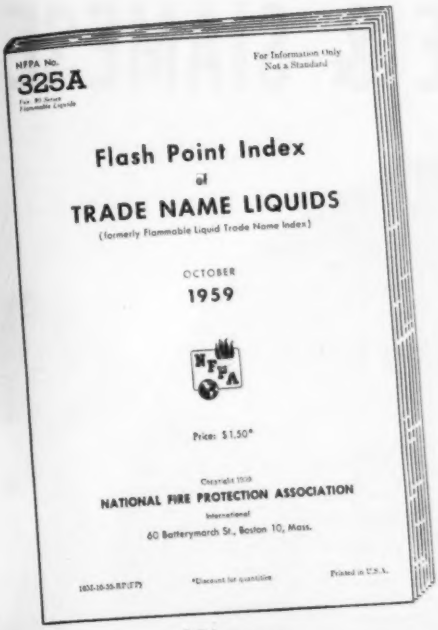

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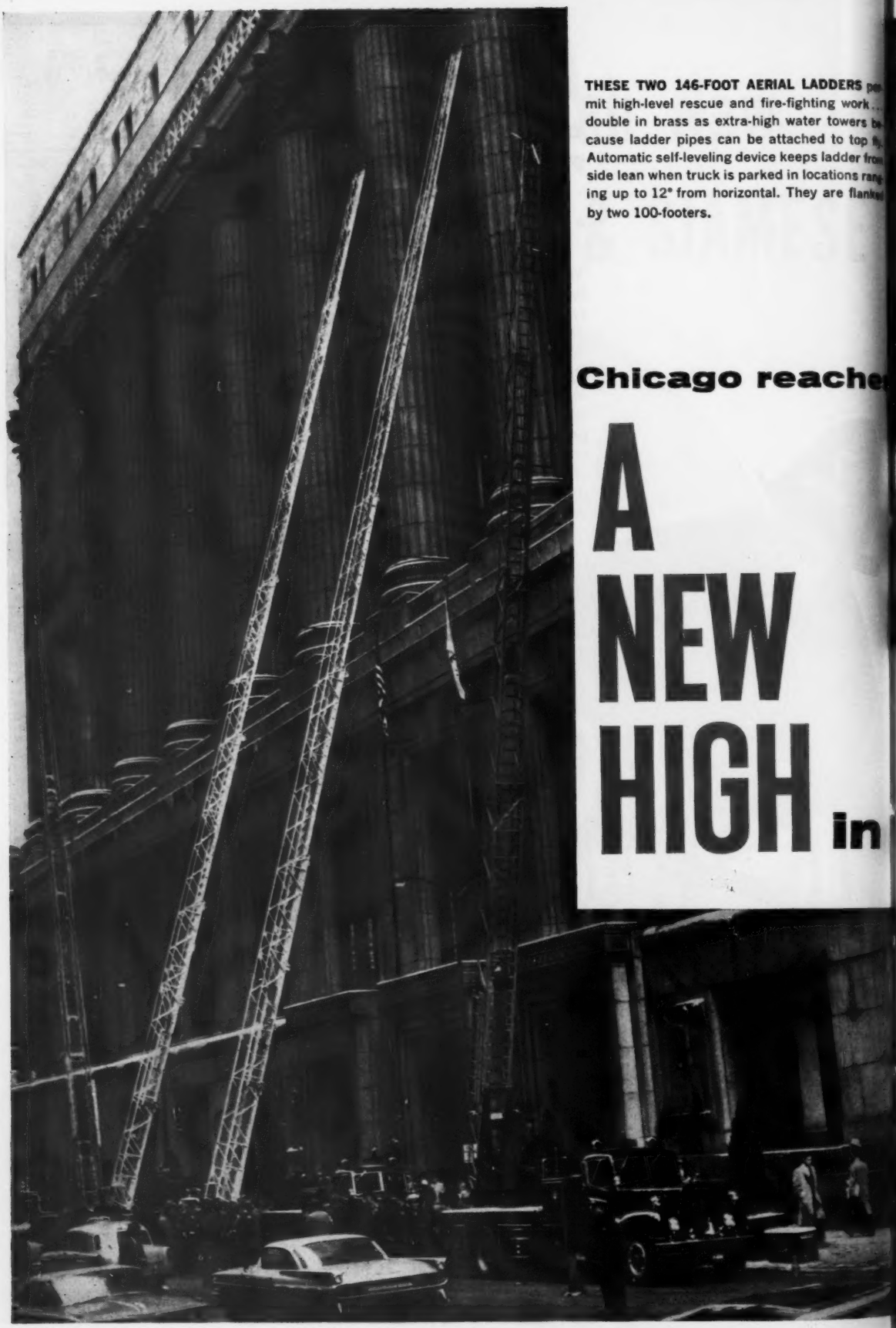

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NFPA FIREMEN

Volume 27 Number 6

A monthly magazine published for the fire service members of the National Fire Protection Association, 60 Batterymarch Street, Boston 10, Massachusetts.

Each time there is a mock air-raid drill, officials responsible for preparing the public announce that due to inadequate preparation of emergency shelters by householders, millions of lives would have been needlessly sacrificed had the raid been "the real thing." Some officials have talked of compelling property owners to provide air-raid survival facilities at a total expense estimated at billions of dollars.

Fire protection authorities have known for a long time that millions of persons in cities, towns and rural areas live in structures where they are in urgent peril from fire day and night. If fire fatalities continue at the present rate in the United States, more than 100,000 persons will perish in the next nine years. In the normal "three score and ten years" life span, more than three quarters of a million lives are almost certain to be snuffed out needlessly. This is not "perhaps" or "maybe" depending upon enemy action but merely the result of American indifference to our daily fire toll of 30 lives lost from fires.

Despite this very real toll of death and much needless suffering, fire safety is treated with indifference in many communities and in individual homes. Simple fire safety precautions are ignored, attempts to strengthen fire laws are resisted except when major disasters, such as the Chicago school fire, occur. In most cities, fire departments are undermanned and often inadequately equipped.

Thus, as little boys at play point toy guns and say "Bang! You're dead," so most people continue to treat life safety as a game to be played, knowing that they will have to shed real tears when their number comes up. The fire service sees the other side of these terrible odds because the tragedies are not remote or infrequent. A community of any appreciable size experiences too many needless fire tragedies each year. One of the dilemmas of the fire service is how to pass this experience along to the public so that individuals will take simple precautions to protect their own lives. This is one of the goals of fire department public relations programs.

A fire in Boston, Massachusetts, in the early morning hours of May 11, pinpointed the dangers and difficulties of a ladder rescue. The fire involved a 4-story brick, wood frame apartment house and caused the death of a 67-year-old blind woman and a man. Four other persons and two fire fighters were hospitalized for smoke inhalation and injuries. One of the building's occupants who survived made his way to a window as ground ladders were being raised. He had collapsed over the sill when the ladder crew reached him. To bring him down, three men climbed the metal ladder which was raised at about an 80-degree angle. Photographers captured the spectacular sequence of the rescue, and this month's cover photo was selected from half a dozen fine pictures. (*Wide World photo.*) The overcome man was hefty in weight and almost dropped to the ground as he was moved from the window to the ladder. With the help of additional manpower, he was eased down the ladder and one more classic rescue was recorded by the Boston Fire Department. This man was one of numerous occupants taken down ladders at this fire.

Certainly, these spectacular and heroic rescues deserve full recognition. A point to consider, however, is that such rescues are acts of last-minute desperation which would be unnecessary if building regulations are followed to provide adequate exits with smoke and fire cutoffs. The NFPA Building Exits Code calls for at least two widely separated adequate exits in buildings of this type. It also specifies stairway enclosures to prevent the upward sweep of flame and smoke such as occurred in this fire, necessitating the strenuous rescues.

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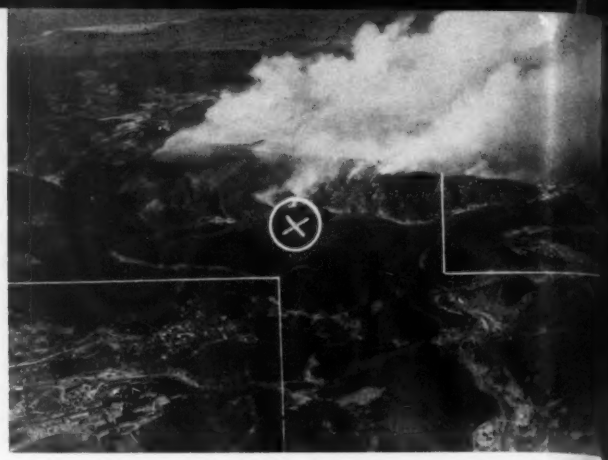
Warren Y. Kimball, Managing Editor; Paul R. Lyons, Editor; Henry S. Gere, Advertising Manager; Dianne Kofman, Editorial Assistant; Shirley Tobey, Fire Service Department; Virginia Stiles, Advertising Department.

A CITY SURROUNDED BY FIRE!



Fire started at spot marked "X" and, aided by wind, spread northerly across west edge of city of Deadwood, marked by white lines at right. A change in wind direction caused fire to flank both sides of Deadwood and eventually burn forest land on all sides of city. At one time it was only one block to the rear of a hospital from which all patients had been evacuated. City of Lead, which sent mutual aid and sheltered evacuees of Deadwood, is at lower left.

The report of Assistant Chief A. A. Coburn of the Deadwood, South Dakota, Fire Department was submitted to the NFPA Fire Record Department last Fall, shortly after the forest fire occurred. However, because this story is particularly significant during the forest and brush fire season, it has been held for this issue of FIREMEN magazine.

The Deadwood fire created a serious emergency for the fire service and the people of the city. It called for coordinated operations of fire department, Forest Service and Civil Defense groups, as well as the enlistment of volunteer manpower. The evacuation of a city is a major task, particularly when fire threatens the routes leading to safety, but responsible authorities in Deadwood had planned for such an emergency and handled it well. Many cities and towns in North America are surrounded by forest lands and in the dry season can be exposed to the same dangers that threatened Deadwood. Assistant Chief Coburn's report may help these communities to develop better plans for such extreme fire emergencies.

ON SEPTEMBER 8, 1959, in the Black Hills area of South Dakota, conditions were just right for a severe forest fire. Temperature was in the 90's, humidity was between 5 and 15 per cent, and wind velocity was between 40 and 60 miles per hour. Consequently, when a fire started near Deadwood it spread through the forest lands rapidly. Within one hour, more than 3,000 acres of timber were involved. Subsequently, some 6,000 acres of wooded land around the city of Deadwood and a number of buildings were destroyed by fire.

The severe conditions and the threat of a complete burn-out of the city of Deadwood called for mobilization of all available manpower and equipment.

A few weeks after the fire, Assistant Chief A. A. Coburn of the Deadwood Fire Department sent a report to NFPA. His report is summarized on these pages. Other sources reported that mutual aid was received from the fire departments of Lead, Sturgis, Spearfish, Rapid City, Balforge and the Ellsworth Air Force Base. A local gold mine shut down production and dispatched all its men to the fire. In addition to the citizens of Deadwood, hundreds of volunteers from surrounding towns also helped.

The U. S. Forest Service provided two helicopters, two converted Navy torpedo bombers and a converted B24. The helicopters were used for rescue and for watching the spread of the fire and the planes worked continuously to drop a mixture of bentonite and water slurry on the fire.

Subsequently, property loss in and around Deadwood was estimated at $190,000.

The Deadwood Fire Department consists of four paid men, twenty volunteers, Chief H. J. Ragatz and Assistant Chiefs Elmer Pontious and A. A. Coburn. The department has two 500 gpm pumpers, a "jeep" unit equipped with a 90-gallon tank, four-wheel drive, a high pressure pump and miscellaneous equipment, a four-wheel drive Ford truck with a 500 gpm pump and a 65-ft. aerial ladder, 2½-in. and 1½-in. hose and other equipment, and a Chevrolet "carryall" truck with masks, resuscitator, smoke ejectors, clothing and other equipment. The department was organized in 1877 and reorganized as a paid department in 1941.

From a report by Assistant Chief A. A. Coburn

The fire started at a home for the aged located about one-half mile west of the city limits. One of the tenants went out to burn garbage in an incinerator. It was reported that he lit a match to start paper burning and a gust of wind blew the paper about 15 feet on the grass and weeds which were quite thick and dry. The weather conditions at the time were the worst possible since the temperature was about 97 degrees, humidity about 5 to 10 per cent, with gusty winds from the southwest at 40 mph. Immediately the fire raced on the ground towards timber about 100 yards northeast in a shallow draw. It is our understanding that an alarm was transmitted immediately to the manager of the home. He in turn called the Forest Service which maintains fire protection equipment here; the alarm was also transmitted to our department, to the Central City department, and to the Lead department. (All of these fire departments maintain jeeps or pumpers for this type of fire, purchased through a cooperative plan of the State of South Dakota, Lawrence County and the municipality.)

Most of Deadwood is surrounded by an "Exemption Zone" — a separate area within the Black Hills National Forest. The Forest Service handles and pays the costs of fighting any fire starting within the confines of the zone and spreading to the National Forest or coming from the National Forest to the zone. Needless to say, this agreement certainly saved a large sum of money for the landowners within the zone.

We received the call about 1:10 P.M. on September 8. Upon our arrival, there were two Forest Service units in action, and shortly thereafter the units from Central City and Lead arrived. However, due to the extreme wind and dryness, it was impossible to keep up with the fire which had already reached the timber and crowned out shortly. From the direction of the fire, it was apparent that it was heading for the edge of Deadwood, and that became our immediate concern.

Our Fire Chief, H. J. Ragatz, was out of town and I, as Assistant Chief, was in charge. It was evident that help was needed immediately and that the safety of the residents was going to become periled. We returned to our station and called the Rapid City radio dispatcher who handles the relay station for two-way radio in South Dakota. All sheriffs' offices, Game, Fish and Parks Divisions, cooperative fire equipment and all city police departments are on this radio network. We asked for all help possible and explained the situation. Also, at this time, we turned on our local fire siren for a long blast which signifies an extreme emergency, and called the schools to have the children sent home immediately.

We then drove our apparatus up the street leading to Mt. Roosevelt and laid hose lines to protect buildings in that area. Of course, a crown fire is impossible to fight as long as it stays in the tops, but the ground fire on the edges may be controlled.

The initial spread of the fire was very rapid as it burned about 3,000 acres in the north sector in about one hour. Then the wind direction changed at 4:00 P.M. so that winds of 50 mph came from the north. This turned the fire back so that it crossed the town at both ends. This also brought all of the smoke directly into town, making it impossible to judge where the fire was. Just prior to this, it was decided to evacuate from Deadwood all the women, children and men who could not fight fire. In spite of the inherent confusion, the evacuation proceeded quite orderly towards Pluma and over the roads from there. The other two highways were shut off by the fire.

The wind caused the fire to jump the southwest corner of town, where it crossed over a small ridge and ignited buildings of a wood preserving plant, then jumped the highway into rather steep country to the south. At the same time, it turned on the northerly edge of town, jumped the highway, and crossed into heavily timbered country on the easterly side. The only road open was towards Central City where the fire had crossed earlier.

The Forest Service set up headquarters in a room adjacent to the sheriff's office — its two-way system is on a different frequency, but messages were relayed over both systems with a minimum of trouble.

The fire stopped its initial run about 6 P.M., but due to the terrain and high winds earlier, many spot fires as far as one-half mile from the main fire had started burning. Men had to be put on fire lines to attempt to gain control before the next morning. A tremendous amount of equipment was brought in from surrounding areas: bulldozers, tank trucks, fire equipment — the cooperative effort of the neighboring towns' fire departments was outstanding. So many spots on the edge of town were exposed that, without the help of the other volunteer fire departments, we certainly would have lost some homes.

At the north end of Deadwood a wood post plant was destroyed. Here the fire has reached creosote tanks and a pole storage area.

Nearly all male adult residents of Deadwood remained in city to help in fire fighting and evacuation work. Here an ambulance crew carried an aged man from Hillcrest Manor.

By nightfall, the Forest Service and the sheriff's office were coordinating their efforts on the timber fire, while we in town were then concerned with stopping ground fires around the town's perimeter.

It was quite evident that a good-sized bulk oil tank farm which was adjacent to the wood preserving plant was in danger from radiant heat and ground fires, so we laid approximately 2,500 feet of line with the Lead and Spearfish fire departments to control that area and protect the bulk tanks and dwellings exposed to the tremendous heat from the post plant fire.

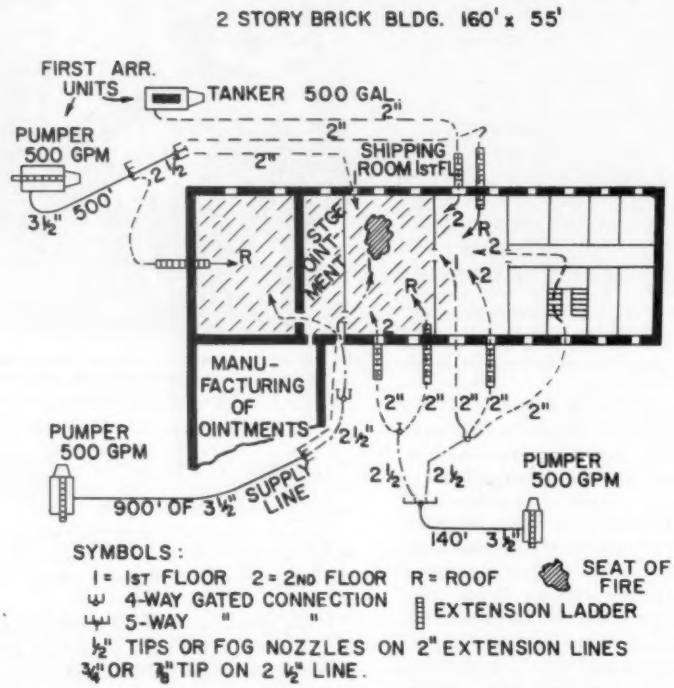
The post plant was completely burned out. The buildings were of rough frame construction and four large creosote tanks were also involved. There was no great damage within the city limits other than a few frame shacks that burned on the outskirts; however, just outside the limits, five dwellings and the property of a tourist court, consisting of about 23 units, were completely destroyed. On the northeast edge of town, another wood treating plant was severely damaged. A frame warehouse was destroyed due to the radiant heat, but we were able to save dwellings nearby.

On Wednesday, the Forest Service had brought in three helicopters, 4 TBM's, and one converted B24 to the Spearfish Airport five air miles from the fire area. Experimental work had been done earlier with a bentonite slurry as a fire retardant and a mixing station was put together at the airport, consisting of a large tank truck, heating units to heat the water, hoppers and weighing equipment for the bentonite, slurry tanks and portable mixing equipment. One pound of bentonite to each gallon of water was pumped into the tanks in the aircraft — the TBM's had three 200-gallon tanks and the B24 had a capacity of 1,500 to 2,000 gallons. These planes then made runs on the hot spots, dropping each load on the windward side — the air blast from the propellers was sufficient to scatter the load before it reached the ground. This proved very effective in knocking tree fires to the ground and retarding spread until ground crews could move in and control it. It is my understanding that approximately 180,000 gallons of this slurry was dumped during the six days.

The fire was extremely hazardous until the following Tuesday when it started to rain — some stumps burned for several days thereafter.

We certainly learned a lot during the fire about mutual aid. Although no definite plan had been set up with the volunteer departments, it could not have worked out any better. The hospital had an evacuation plan set up, and the sisters carried it out very quickly, removing the patients within 45 minutes.

FIRE IN DRUG MANUFACTURING PLANT MOSCOW, USSR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EXTENSION LADDER
½" TIPS OR FOG NOZZLES ON 2" EXTENSION LINES
¾" OR ⅞" TIP ON 2 ½" LINE.

RUSSIAN FIREMEN AND THEIR FIRES

by Boris Laiming*

"NO TWO fires are alike," firemen often say, but they also recognize the need for standardizing and pre-planning fire operations for specific occupancies. Detailed studies of operations at fires anywhere can offer food for thought and aid our planning for the future.

With this in mind, the writer proposes to make a brief excursion to a Russian fire scene in Moscow, USSR. There has been little if any publicity on this subject in America, partly because of the language barrier, but principally due to a nearly complete lack of data on Russian fire service organization and operations. There are many Russian publications describing fire apparatus, research of various techniques, fire protection standards and some fires, but none of these books or periodicals tell anything about the number, location or over-all manning of fire departments in specific localities in the USSR, nor do they include comprehensive statistics regarding fires or fire losses according to occupancies, fire causes, or other categories.

No reason for this paucity of factual data about the Russian Fire Service can be offered here. A reader's query may, perhaps, be answered partly by reference to an article entitled "Fires and Firemen in USSR" published by the USSR Embassy in this country in the September, 1959, issue of the *Volunteer Firefighter*, of Charlotte, North Carolina. The distinctive style of that article forms an excellent example of the type of material released for publication in Russian fire service periodicals. (*The article to which Mr. Laiming refers has a number of general statements on fire protection and Russian fire fighters, but little factual data. — Ed.*)

***About the Author**

NFPA member Boris Laiming for many years has been studying fire departments and fire protection in the United States and other countries. In addition to writing articles for technical and general publications, he also serves as Senior Geologist of the Paleontological Laboratory of The Texas Company in Los Angeles. In 1897 he was born across the street from a fire station in St. Petersburg, Russia. He lived in palaces there for some 17 years, graduated from a college of law in St. Petersburg, served for six months in the army, and finally left when the Russian revolution occurred. In the passing years he continued to make a study of the developments of the fire service in Russia as reflected in this article.

A few basic facts regarding the Russian fire service can be gleaned, however, from outlines published in various Russian manuals and standards. According to those sources, the fire service in the USSR is constituted as a Government Fire Protection Department for the entire country. This department supervises fire prevention regulatory activities, fire research testing stations, fire training and competitions, and paid fire fighting services in cities or industrial and semi-volunteer services in other communal entities.

The Moscow fire department, or garrison as it is locally called, operates under a commander and his staff who are responsible to the top Soviet authority within the boundaries of the Community of Moscow. According to most recent available geographical information, the Moscow Community comprises over 6,000,000 population and a built-up area of about 135 square miles. It is served by more than 40 fire stations (exact number unknown) which are controlled from a dispatching center and operate under prearranged first and multiple alarm assignments, with staff officer supervision at all serious fires.

It should be of interest to the people in this country to learn that the fire service in USSR has a universal telephone dial number "01," which can be dialed without a coin from street telephone pay stations. Wouldn't it be nice if an American citizen could dial "01" from a telephone anywhere in the United States and get the right fire department?

The official Russian fire protection periodical *Fire Affairs* contains pictures of fire apparatus and describes fire ground action in different issues. For example, Figure 1, reproduced from the March, 1958, issue of that periodical illustrates a pumper drill at Station No. 1 in Moscow. It shows a 3½-in. supply line being reeled away from the pumper by two firemen while another

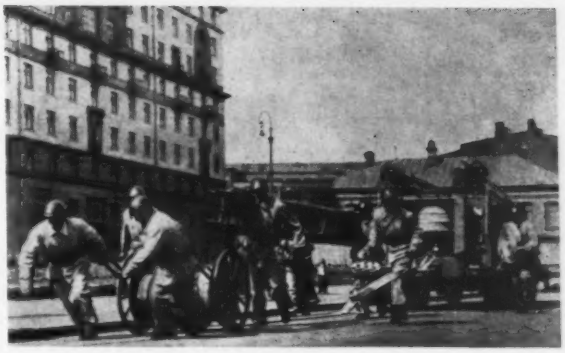


Figure 1. Pumper going into action at Fire Station No. 1 in Moscow. In foreground, two men are unreeling 3½-in. line. Gated connections for extending lines are carried by fireman in right center. Just behind front ladder man is another fireman carrying a standpipe connection which will be set on a flush hydrant in a manhole before pump suction is connected. Fireman at extreme right is carrying rolled 2½-in. line. Other firemen will take 2-in. lines for extension. (Photo from *Fire Affairs.*)

man (center) is carrying two gated siamese connections to be used at the end of the supply line. Behind the men carrying an extension ladder is another fireman handling a hydrant standpipe which must be set on a riser in a manhole before the pump's suction can be connected. Other firemen carry 2½-in. and 2-in. hose in rolls for making extensions on the gated connections at the end of the main supply line.

Another photograph (Figure 2), shows three units, which constitute a typical complement of a Russian fire station, drilling in the well-known petroleum center of Baku. The tanker (in background) supplies a line going up a 4-sectional 100-foot aerial ladder (center), while men are donning breathing apparatus near the squad-pumper in the right foreground. Fire departments in major cities like Moscow have special squads in some stations designated as "smoke-protective units" which are fully equipped with self-contained breathing apparatus. Crews of individual units average 6 men under a squad commander who reports to a station officer, and the latter in turn is supervised by a district commander, more or less comparable to a battalion chief in an American city. Staff officers reporting to multi-alarm fires immediately designate sector commanders for different sides of the fire and the staff water supply officer takes charge of spotting pumpers and laying main supply lines. A command post is set up and records are kept of orders issued and action taken. Communication between the Chief and the sector commanders is maintained by "walky-talky" radio. These operations are illustrated in the following story of an actual fire where the Moscow fire fighters appear to have made a good stop.

This fire occurred in an L-shaped, 2-story drug manufacturing brick building with a sheet metal roof on wood sheathing, wood floors, plastered wooden partitions and ceilings, and ordinary wooden doors between the rooms. The portion of the building involved by fire was 160 by 55 feet and was occupied on the first floor by the powdered and liquid drugs and ointment departments, with a shipping section in the center where the fire started. On the second floor were the labeling and packaging departments. Metal bars in

(*Continued on page 24*)

(Below) Figure 2. Typical complement of Russian fire station drilling in city of Baku, USSR. Tanker in background supplies 2-in. line up four-section, 100-ft. steel aerial (center) as firemen don breathing apparatus near pumper at right. (Photo from *Fire Affairs.*)

THINGS TO CONSIDER WHEN

PREPARING ANNUAL REPORTS

EVERY well-administered fire department each year summarizes its activities and accomplishments in one or more written reports. In larger departments the fire chief will prepare two types of annual reports: one, a detailed report directed to the chief administrator of the city, and a second report, of more general nature which contains information of use to the community's taxpayers, to fire departments in other cities, national fire service organizations, newspapers, magazines and other news media. Good advice for preparing both types of reports is contained in the book *Municipal Fire Administration* published by the International City Managers' Association, 1313 East 60th Street, Chicago, Illinois.

It is interesting to note the many types of reports in this second classification which are distributed by fire departments. Each year many departments send their reports to NFPA, and much information in these booklets contributes to fire studies made by the Association. These annual reports vary in size, manner of presentation, type of paper, and typography. A few of the largest cities publish expensive printed reports with numerous engraved illustrations and four-color covers. Small paid and volunteer fire departments might simply prepare four or five typewritten pages containing general information on the number of fires fought, the number of alarms, estimated dollar fire loss and a few other statistics. Between these two extremes is a variety of printed, mimeographed and typewritten reports of various sizes, some of which reflect excellent preparation.

It may be helpful for fire chiefs to consider several things when preparing such general annual reports. First of all, the annual report is a definite tool of public relations and, accordingly, should be a thorough, complete and accurate presentation of information. Even the fire department with limited funds can prepare a good report at minimum cost. Some volunteer departments achieve this merely by typing the information neatly and in logical sequence on a good grade of paper. Other small departments may resort to a mimeograph machine and perhaps get the services of a skillful artist to prepare humorous sketches, charts and illustrations which put the information across to the reader with a punch. Fire departments in larger cities may have a report prepared by professional illustrators and printing personnel.

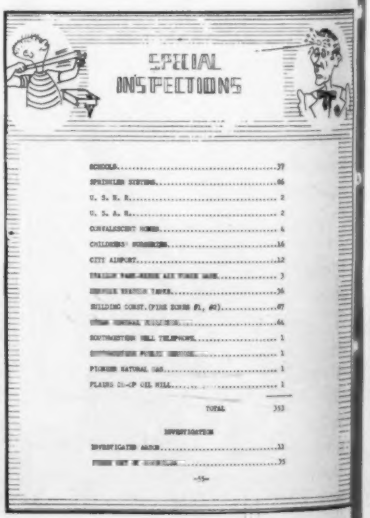
The dimensions of the report can be important. The majority of fire departments seem to prefer the 8½- x 11-in. size and this is adaptable to the filing systems in most offices. A small group of fire departments use the 6- x 9-in. size. However, some fire departments prepare their reports on 11- x 18-in. "legal size" paper which generally is inconvenient for handling and filing.

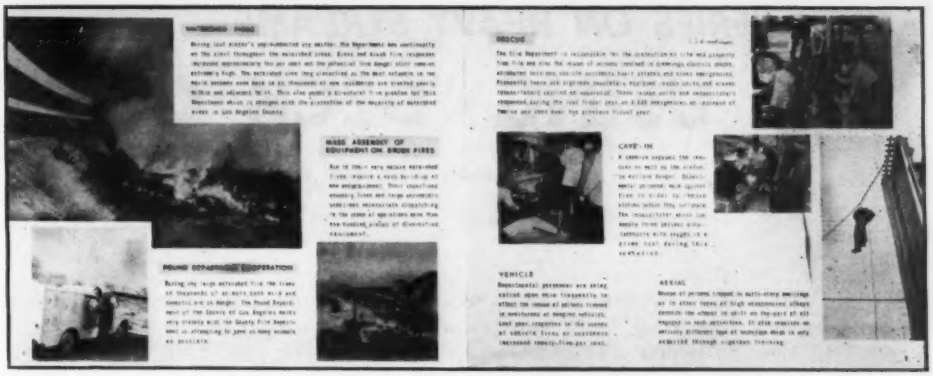
In almost all cases, white paper stock is used but if the report is to be mimeographed or prepared by the "ditto" method, it is well to keep in mind that a good grade of paper helps to minimize smearing or blurring of the figures or letters. Similarly, when preparing more expensive reports by letterpress or by offset, the paper should be suitable for the particular type of reproduction. A local printing firm can advise on this selection.

Most fire chiefs have a good idea of the usual circulation of their general annual report but it is always well to have a few extra copies to answer inquiries from other fire departments and fire service organizations. The report should be prepared as soon as possible after the end of the year, preferably within a month. For news-

(Left) Fire Department in City of Los Angeles showed a silver coin inside a life net in one of its pages reporting expenditures. The 32-page, 8½- by 11-in. booklet called "The Size Up" makes good use of photos and graphs to cover the year's activities.

(Right) Cartoons and neat tables in the Lubbock, Texas, Fire Department report show what can be accomplished by mimeograph or multilith reproduction.





(Right) **Two-page spread from a recent report by the Los Angeles County Fire Department. Action photos of fires during the year and brief text for each subject make a neat summary of each type of activity.**

papers, radio and TV stations, it is helpful to prepare news releases summarizing the particular parts of the report which the fire chief considers of major interest. For example, if there has been a marked lowering of fire losses in a five-year period, the fire chief certainly would want to issue a statement to this effect. On the other hand, the need for new fire apparatus, personnel or fire stations can also be highlighted by well-prepared news releases.

On these pages are a few illustrations showing the manner of presentation of some annual reports. In recent years there has been a notable trend toward the use of illustrations and brief descriptive copy. In other words, for these general annual reports, fire departments prefer to make each page "tell a story" with illustrations rather than simply presenting detailed tables of figures and statistics. Note, for example, the illustration of the page from the Lubbock, Texas, Fire Department's annual report. Each page of the report had an illustration at the top which was a suggestion of the page content or else was a caricature of some member of the fire department. The report was reproduced by multigraph and the artwork was done by a member of the department.

Reports of Los Angeles County are typical of the expensive type prepared by the biggest fire departments. These reports, however, have wide circulation and reflect the work of thousands of fire officers and fire fighters in the city and county.

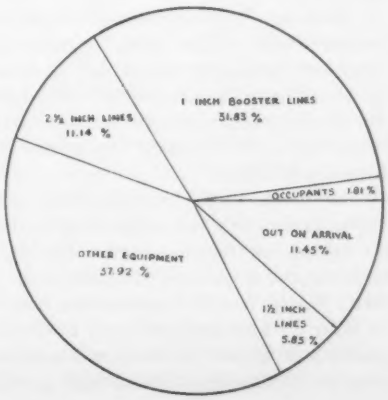
Sometimes the fire department's annual report is included in the general report of the city administrator. While this may be economical for the city, in most cases the report has been edited so much that little information of actual fire department progress can be gleaned by the average reader. In addition, such city reports frequently include numerous pictures of political personalities which generally detract from the substance of the report.

As mentioned previously, the book *Municipal Fire Administration* spells out some of the basic requirements for annual reports. Generally, fire departments provide the essential information in their reports, but the manner of presentation differs considerably. Some fire departments place more stress on reporting their organization and personnel administration, while others make fire losses and the annual budget the most significant part of their reports.

One important aspect of the annual report which needs attention by fire chiefs is the reporting of injuries to fire fighters. Very few of the reports surveyed for this article gave adequate information on this subject. Many fire departments list the number of men injured or killed during the year, but, on a national scale, much specific information is needed on how fire fighters are injured or killed in the line of duty and the annual report is a good medium for presenting this information.

General subjects covered in the better reports surveyed were: A description or chart of the fire department's organization or chain of command, the number of alarms and fires, causes of fires and types of occupancies involved, dollar losses by month, year and a three- or five-year average, equipment used for fire extinguishment, personnel deaths and injuries, fire deaths and injuries, resuscitation equipment used, first aid and rescue activities, type and age of apparatus used by the fire department and a summary or estimate of the significant fire protection changes or needs in the community. This last item usually includes a report of specific needs of the fire department for apparatus, manpower or fire equipment. Some departments include a section covering "how the fire fighter spends his time," to emphasize the many activities of fire department service to the community.

As shown on these pages, fire departments use different methods of presenting this information. The trend is away from the dry, statistical summary or wordy explanation. Basically, the annual report is a summary of the fire department's accomplishments and needs, and, as with every other means of public relations, the fire department should put its "best foot forward" by preparing an attractive and thorough report and trying to improve it each year.



Fire department in Wichita, Kansas, used this circle or "pie" to show how fires were extinguished during course of one year.

A NEW SERIES ON HEAVY STREAMS—

USING "DECK GUNS"

by Warren Y. Kimball, Managing Editor

Part III

THE fire service uses a variety of names to identify heavy stream devices by which two or more big lines are siamesed to form a master stream. Some of these names are "turret nozzle," "battery," "deluge gun" or "deluge set," "wagon pipe," "monitor nozzle," "high pressure gun," as well as "deck gun."

Several of these names, like many other fire department terms, have been borrowed from the military but have not always been used in the same context. For example, a true turret is a heavily armored tower-like structure within which guns are mounted. Fire apparatus does not have armored turrets. A "battery" consists of apparatus used in battering and "two or more pieces of artillery under a single command." (Merriam-Webster) Thus a single gun is not a battery. The "deluge gun" is a name believed derived from the old time "deluge set" which consisted of a siamese, a short length of large lead hose, and a large open nozzle supported by a tripod. The term is now applied to portable deck guns or monitor guns. Incidentally, the only authorized pronunciation as given by Merriam-Webster is dĕl′ūj, not de-luge. [Old French, from Latin diluvium, from diluere meaning "to wash away," from di- (=dis) and luere meaning to wash.] Webster's definitions seem to apply to a fire department gun when properly supplied:

"1. An overflowing of the land by water; a flood. 2. An irresistible rush of anything in overwhelming numbers, quantity, or volume." This is what the deluge gun is supposed to do to a fire when effectively operated.

The term "wagon pipe" is used in some departments which still have apparatus serving as hose wagons as distinct from pumpers. The wagon pipe is a permanently mounted short standpipe attached to the apparatus with a swivel nozzle at the top and a two- or three-way siamese at the base. Some wagon pipes were fed from two sides of the apparatus with siamese on each side.

The term "monitor nozzle" is perhaps more difficult to rationalize. The word monitor is from the Latin "monere" meaning "to warn." It pertains to discipline or checking of instruments. Perhaps the fire service use of the term relates to the armored warships having revolving turrets named "monitor" by their inventor, Captain Ericsson.

The term "high pressure gun" was formerly very useful in denoting the large capacity deck guns mounted on apparatus in areas served by high pressure water systems and capable of streams in the 1000 gpm range. Since World War II the term has been misappropriated to refer to tree-sprayer type, low-volume squirt guns which bear about the same relationship to the original concept of fire department high pressure guns as the hummingbird bears to the bald eagle. The little spray gun supplied by ¾-inch hose might better be termed a "fog gun" as it is merely a first-aid device with less than 1/30th of the fire fighting potential of the true high pressure gun.

A term for heavy stream guns that is perhaps about as satisfactory as any other is "deck gun." This term has come into use because the guns have been carried on the top decks of pumpers, hose wagons and other apparatus including fireboats. The gun can be operated in place from the deck where it is carried by merely connecting the required supply lines. Many deck guns are so arranged that they can be readily removed from the apparatus and set up in other locations. These are termed "portable deck guns" in contrast to "permanent deck guns." The portable deck guns usually are somewhat smaller and lighter in weight than the permanent deck guns.

Data on the flows at various pressures obtained from different types of heavy stream devices by various leading manufacturers was obtained by tests conducted by the NFPA Committee on Fire Department Equipment at the Rochester, N. Y., Fire Academy. This data has been published by NFPA and is available in pamphlet form at 35 cents per copy.

Effective use of deck guns or deluge sets requires three major considerations:

1. Placement of the device so that the stream will be effective for the intended purpose. This means that the device must be positioned so that the stream may be directed at the proper angle and cut off or extinguish the fire.

2. Attachment of enough supply lines to provide the volume of water needed for the size and type of nozzle or tip selected.

3. Sufficient pressure at the device for maximum effectiveness whether straight stream or fog. In general, it is desirable to plan to provide at least 100 pounds per square inch pressure at the nozzle. Slightly less pressure may be acceptable for large solid stream tips but it is surprising how much more effective a stream is with good pressure than with only fair pressure.

One of the advantages of heavy stream devices is that, because of their inherent stability, they can be used with pressures and volumes much greater than can be employed with manually-held hose lines. If fire departments made it a rule to be certain that nozzles in use were properly supplied before setting up more streams, fire ground effectiveness would vastly improve across the continent.

In former years one of the prime responsibilities of an engine company officer was to see that his engine was properly "set" at the best available hydrant or other water supply, and that the line had the required pressure for the size nozzle employed. Gradually, in many areas, laxity developed. In an overemphasis

Deck pipe with hand wheel and worm gear for discharges of 200 to 600 gpm. Features 360 degree rotation, locks in place automatically. Body is painted red, trim is of polished brass or chrome plate. Style 509 of Akron Brass Mfg. Company, Inc., Wooster, Ohio.

Model No. 292 of Elkhart Brass Mfg. Company, Inc., Elkhart, Indiana, is also available with gear control for vertical movement (Model 293) and for vertical and horizontal movement (Model 294).

Pedestal mounted gun of Samuel Eastman Company, Concord, New Hampshire, has aluminum alloy or red brass yoke, 21- or 26-in. base, and 3¼- or 4-in. waterway as requested. Body is painted red with chrome plated trim.

A Selection of Deck Pipes

Model DP75WG of Wooster Brass, Division of The Fyr-Fyter Company, Dayton, Ohio, has a 1,000 gpm nozzle with wheel operated worm and gear vertical control. Discharge pipe is 2½ in. ID; various tips furnished on request. All bronze construction.

"Invincible" nozzle of 2,000 gpm capacity is on this gear controlled deck gun manufactured by F. N. McIntyre Brass Works, Inc., Cambridge, Massachusetts.

upon the reduction of water damage the size of tips employed on the big lines was reduced. The nozzle pressures were allowed to fall to the lowest that could be considered a fair stream and in many places poor fire fighting streams have become accepted. Much of the reason for this has been the failure of municipalities to provide enough hosemen to handle the nozzle reaction from a good standard hose stream. Obviously, two men at the pipe of a hand line cannot handle as much volume and pressure as a three- or four-man nozzle crew. Thus, where hand lines with 1¼-inch tips flowing 325 to 350 gpm and 1⅛-inch tips flowing 260 to 290 gpm were once commonplace, flows from single 2½-inch hand lines have been allowed to drop to the 150 to 200 gpm range. However, there is no reason why heavy stream devices which can be controlled by one man should not be operated at the correct volume and pressure.

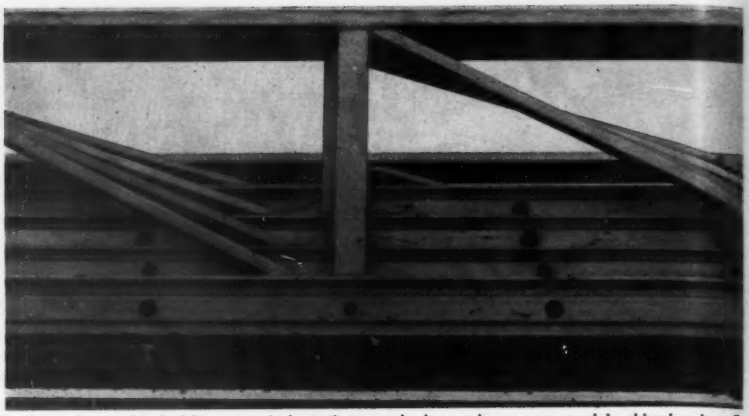
There are few, if any, fire departments today that have sufficient men on duty or immediately available at all times to be assured of utilizing full pumping capacity by means of hand lines. Except in rural communities where small capacity pumps are employed, the only way in which the available pumping capacity can be more fully utilized is by suitable heavy stream devices.

It is unfortunate that so many pumping engines do not carry nozzles capable of using the full capacity of the apparatus. Nozzles are the outlets through which the water must flow on the fire. Where we find 750 gpm and 1000 gpm pumping engines with nozzle tips no larger than 1-inch or 1⅛-inch diameter, we know at once that much of the potential pumping capacity is likely to be wasted.

It should be the responsibility of every fire department to make certain that each company has available nozzles which will make it possible to utilize the full flow of its pumps when occasion demands. It should always be kept in mind that a small percentage of fires numerically make up a major part of the losses in any community. These big fires require that heavy streams be used promptly and effectively. A number of fire departments have adopted the principle that each engine company should carry a heavy stream device capable of fully utilizing the pumping capacity.

Next to a deficiency in the number of heavy stream devices is the difficulty most departments have in laying hose lines to supply the devices. All too many fire trucks are loaded so that they can lay but a single big line. This is a most serious defect. Where apparatus is equipped to lay multiple lines the necessary lines can be dropped simultaneously with a minimum of time and labor. Where only one line can be laid it becomes necessary to stretch additional lines by hand, a slow, time-consuming job requiring much exertion and manpower. The argument, that divided hose bodies make it impossible to lay long single lines is spurious, because there is no problem in carrying the hose in the separate compartments connected for single line lays, with an exposed coupling to be broken when multiple lines are needed. The divided hose body has other advantages also in that use of hose can be rotated better from one compartment to the other whereas the bottom tiers of a single compartment hose load are seldom used.

SOME COMMENTS ON AERIAL LADDERS



Black marks on this ladder were indentations made by a sharp axe used in chipping ice. To preserve strength of metal aerial ladders, ice should be removed by steam, not by chipping.

THE strength, stability, and power operation of the all-metal aerial ladder has extended its scope of use far beyond the limits of the wood aerial ladder.

The all-metal aerial ladder serves for several types of rescue operation in addition to normal use as a power-operated ladder. It has been operated as a cantilever boom, permitting rescue operations which previously were not possible. It has served many departments in difficult ventilation operation to speed the control and extinguishment of a fire. Used with a ladder pipe, the all-metal aerial ladder has demonstrated its capacity for heavy streams at various heights and positions.

This adaptability of the all-metal aerial ladder is being utilized by the fire service to render better protection and a wider range of service.

The zeal of some fire departments to achieve maximum use of the aerial ladder has sometimes resulted in overloading and consequent damage to the ladder. Some improper uses of the aerial ladder (such as trying to push over a wall) were never contemplated by the designers.

The all-metal aerial ladder is designed for operation within load limits that provide for normal fire service loading plus a factor of safety. This loading is usually based on one, two, or even three men per section, depending on the angle of elevation, extended length, and whether the ladder is in a cantilever

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or supported position. Hose loads and ladder pipe weights with nozzle reaction are also calculated for stress, bending, shear tension, compression, and torsion. An aerial ladder used within the recommended load limits will render safe and dependable service for a normal life period of 20 or more years.

The life period is determined by a number of factors, such as type of maintenance, degree of overloading and accidents, but, because of these varying factors, no fixed formula or rule can be given for determining the useful life for each ladder.

Aerial ladder manufacturers provide charts that show the maximum recommended loading for cantilever (top end unsupported) and supported conditions at all angles and extension, recommendations for water tower operation, man loading, volume of discharge and nozzles.

In the fire service, however, emergency situations which involve life safety may require ladder usage beyond these recommendations. These unusual operations may produce loads and stresses greatly exceeding the design load, and, after such use, there may or may not be visual evidence of permanent set or deformation in the ladder structure.

Fire departments in the Northern States and Provinces of Canada during winter operation frequently experience icing conditions that produce severe ladder overloads. For example, in freezing conditions water spray can build up a heavy load of ice on the ladder. When such a condition develops, careful handling is required. The most effective and safest way to remove the ice is with a steam jet. Do not move the truck until the ladder can be lowered and sections at least partially retracted.

After any use involving overload, the aerial ladder should be inspected carefully and the ladder should be tested. Any ladder that is not square and true, free from twist or wind when fully extended at an angle of 45 to 50 degrees, should be load tested.

The Fire Apparatus Manufacturers' Association aerial ladder manufacturers have cooperated with the National Fire Protection Association and the International Association of Fire Chiefs to provide a standard procedure for testing ground and aerial ladders. This is described in NFPA Standard No. 193.

Rescue of two boys from ice in swollen river necessitated this emergency use of aerial ladder. Careful study shows that ladder is severely bowed and twisted with this load and extension.

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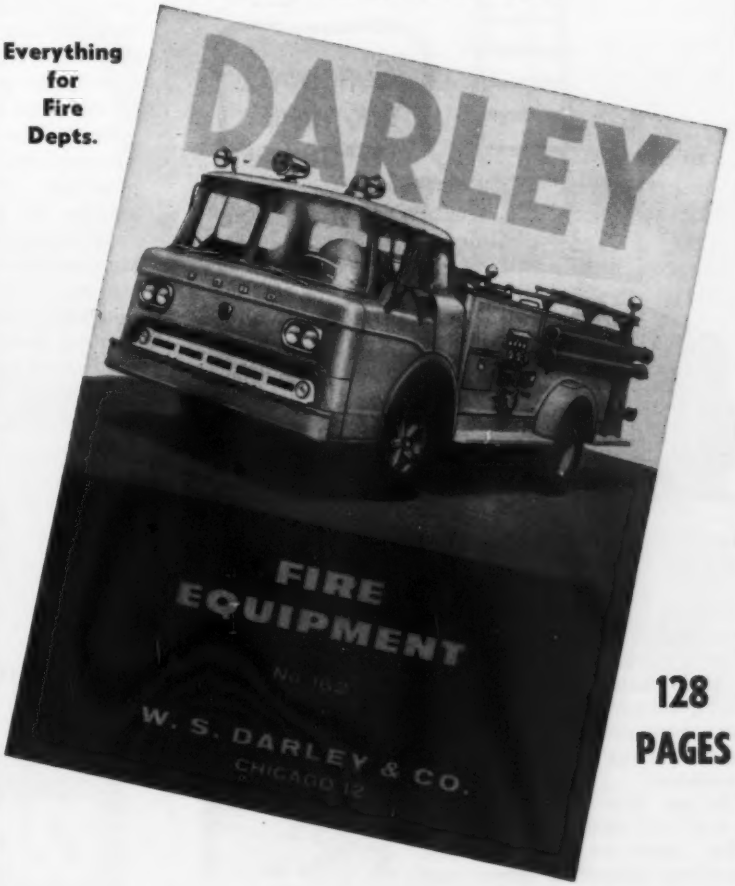
Everything for Fire Depts.



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Monitored Radio for Volunteers

Twenty-four volunteer fire fighters in Martinsville, Somerset County, New Jersey, now use monitored radio receivers for fire alarm response. The alarm system recently installed by the General Electric Company is used to alert the volunteers in a six-mile strip in Washington Valley. Control point for the system is at the fire station where a master radio transmitter is located. When a fire is reported the siren alarm is sounded, but at the same time the dispatcher trips a switch which activates the tone alarms in the volunteers' receivers. The receivers are silent at other times until the tone is broadcast. After sending the alarm, the dispatcher announces the location and nature of the fire. Certain volunteers go immediately to the fire scene while others are designated to man the apparatus. The department also has a spare monitor receiver which members can take with them when they are attending social functions or other meetings in the community. As shown below, for mutual aid the dispatcher can sound all sirens in Zone A and Zone B or with the code-selective radio equipment he can signal houses of individual chiefs or a group.

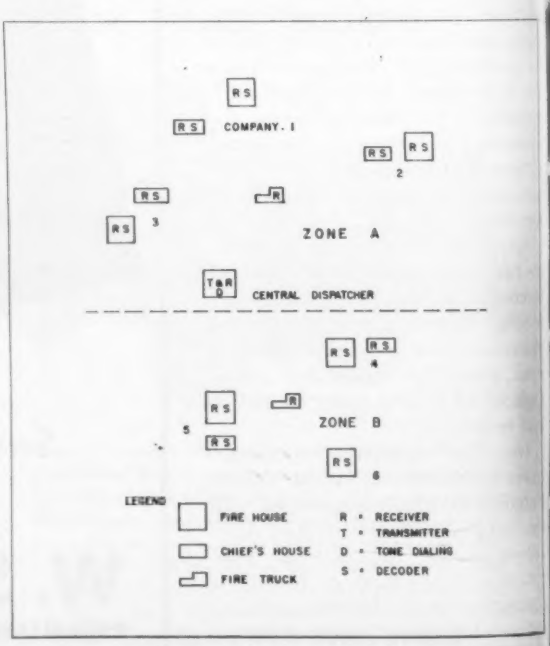

Illustration of monitored radio network in Somerset County.

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Imperial tip delivers full gallonage at any setting.

Style 730 2½" Axial Playpipe with Imperial Tip

Spring steel handles deeply embedded in rubber.

Swiveling base, controls always on top. No kink in hose.

See New Akron Brass Catalog 60—Page 26

Compact. Perfectly balanced, shut-off in the center, not on top. 15⅜" long.

Full swiveling base keeps hose straight. Controls are always on top where they're easy to see and handle.

Spring steel handles, deeply embedded in rubber, anchored securely to playpipe body. Cannot pull off. Added safety. Comfortable grip.

Tip adjusts easily under any pressure. Imperial tip gives same gallonage from straight stream to wide angle fog.

Lightweight! 14¾ lbs.

2 Nozzles in 1

If you want to go forward with 1½" line, shut off, take off tip, add 1½" line to playpipe. Quarter-turn baffle tip and presto — your 2½" nozzle becomes a 1½" nozzle.

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FIRE FIGHTING EQUIPMENT

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Large Loss Fires — 1959

ONCE again, the NFPA *Quarterly* contains an important study of large loss fires in the United States and Canada. The issue just published reports that 410 of these major fires destroyed more than $356,000,000 worth of buildings, industrial installations, transportation equipment, forests and other property. The total exceeded the previous record for one year (1957) by more than $6,500,000. Seventy-three fires each resulted in more than $1,000,000 worth of damage.

There were 47 major transportation fires, all but one involving aircraft. The loss was $138,990,000 and 135 fatalities occurred in these accidents.

The large loss fire report covers only those fires which bring losses to a quarter million dollars or more. The report is prepared following an extensive study by the NFPA Fire Record Department. It shows that last year 364 large loss fires occurred in the United States with a loss total of more than $331,000,000. The cost of 46 fires in Canada was just over $25,000,000.

NFPA member fire departments who receive the *Quarterly* are urged to make a detailed study of this report and to make the information available to members of their respective departments.

Booklet on School Fire Safety

THE second edition of a 6-in. by 9-in., illustrated 48-page booklet titled "Is Your Student Housing Fire Safe?" has been published by the Federation of Mutual Fire Insurance Companies, 20 N. Wacker Drive, Chicago 6, Illinois. It presents some detailed recommendations on fire protection and fire prevention for various types of school structures. The main portions of the text deal with "the three essentials of escape," "fire prevention" and "fire protection." Other useful sections cover the responsibility of individuals, a self-inspection survey form, the establishment of a fire control plan, smoke and heat spread characteristics, a "chronology" of the Chicago school fire and some important facts and statistics.

Copies of the booklet can be obtained by writing to the Federation of Mutual Fire Insurance Companies at the above address.

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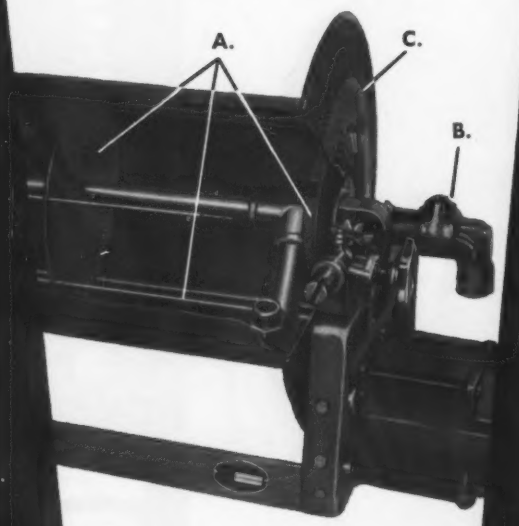

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For a complete "inside story" on performance tested Hannay reels for fire-fighting equipment, write for the big Hannay catalog.

Hose Reels by
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CLIFFORD B. HANNAY & SON, INC., WESTERLO 11, N. Y.

Russian Firemen and Their Fires

(*Continued from page 13*)

the windows handicapped entry by firemen and holes made in partition walls by men who were repairing the heating system aided the rapid spread of the fire. A post-fire investigation attributed the fire to circumstances which resulted from thoughtless action on the part of the occupants. At closing time, workers noticed a water leak from a pipe of the heating system which was undergoing repairs. They placed a barrel under the leak on top of packaged merchandise. The increasing weight of the barrel as it filled with water during the night crushed a number of packaged glass vials which contained liquid ointment made of sunflower seed oil diluted with an ammonia solution. This liquid came in contact with potassium permanganate packed in cardboard cartons and stored contrary to regulations in the same room. A passer-by telephoned in the fire alarm early the next morning.

The station officer in command of the first fire department assignment found the central portion of the building heavily involved and ordered 3 lines laid as shown in the accompanying sketch. The first line from a 500-gallon tanker went to the second floor over an extension ladder; two more lines were laid by the 500 gpm pumper from a hydrant 500 feet away. One of these lines operated on the seat of the fire on the first floor through a vent in the outside wall and the other line went to the attic over an extension ladder. Simultaneously, the commander of a "smoke protection squad" which arrived at the rear of the building radioed a second alarm. A strong puff, caused by exploding alcohol bottles in the packaging section, knocked a hoseman off the ladder as he was entering a second-floor window, but he returned to continue the attack. The District Chief, accompanied by squad-men with breathing apparatus, sized up the fire and ordered a third alarm. As additional units arrived, two more 500 gpm pumpers, 8 more hose lines and additional "smoke protection squads" were put to work under the direction of the Staff which set up a Command Post. The sketch shows how the fire was fought. It is interesting to note that out of 11 lines laid, 10 were "B" lines (2-in. extensions with ½-in. tips or fog nozzle) and only one was an "A" line (2½-in. line with ¾-in. or ⅞-in. tips) taken to the seat of the fire by men with breathing apparatus, under the protection of another line with a fog nozzle. Another unusual feature of the fire operations from the American standpoint is the use of so many gated connections to reduce three 3½-in. supply lines from the 500 gpm pumpers to only 11 small streams.

The fire appears to have been handled efficiently and confined to about half the building which had communicating rooms throughout and contained highly combustible and explosive materials.

Except for some operating procedures peculiar to the Russian fire service, the story just told could have happened anywhere in the world in so far as the human factor contributed significantly to the start of the fire. Since no other details were given in the original Russian story, the readers may use their own imagination to speculate over other factors which may or may not have contributed to this fire.

FIRE CHIEF

Minimum High School education. Prefer either college or specialized training in engineering and/or fire protection. Must be able to read blueprints.

Require experience in administrative work, fire tactics and strategy, plus good knowledge of fire prevention and protection codes.

To supervise approximately 25 employees.

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PERSONNEL DEPARTMENT

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Increase in Use of Aircraft on Forest Fires

A RECENT fire report prepared by the Forest Service, U. S. Department of Agriculture, states that aircraft were used more in fire control work during 1959 than in any previous year. Fixed wing aircraft flew 26,030 hours and helicopters 6,716 hours compared to 22,923 and 4,106 hours respectively in 1958.

Reconnaissance of fires increased 40 per cent and air tanker use 117 per cent over the previous year. Altogether, 9,629 fires occurred on forest service lands last year. Approximately 285,000 acres were burned, more than double the amount in 1958 and above the five-year average of 211,300 acres. The California region experienced the most severe season since 1924. It is interesting to note that man-caused fires were only 4 per cent more than the previous year's nation-wide average, but the three Western regions had 40 to 50 per cent more man-caused fires than their normal experience.

The Forest Service report states that fourteen lives were lost in or during fires or in work related to fire control. In California five men burned to death from one fire, one died from burns suffered in another fire, one succumbed to injuries from a fire-retardant drop, one from pneumonia caused by smoke inhalation, one died from a heart attack, and one lost his life in a truck accident. In Idaho, three men died from burns received in an airplane landing accident. One man was killed in Utah when struck by a helicopter rotor blade.

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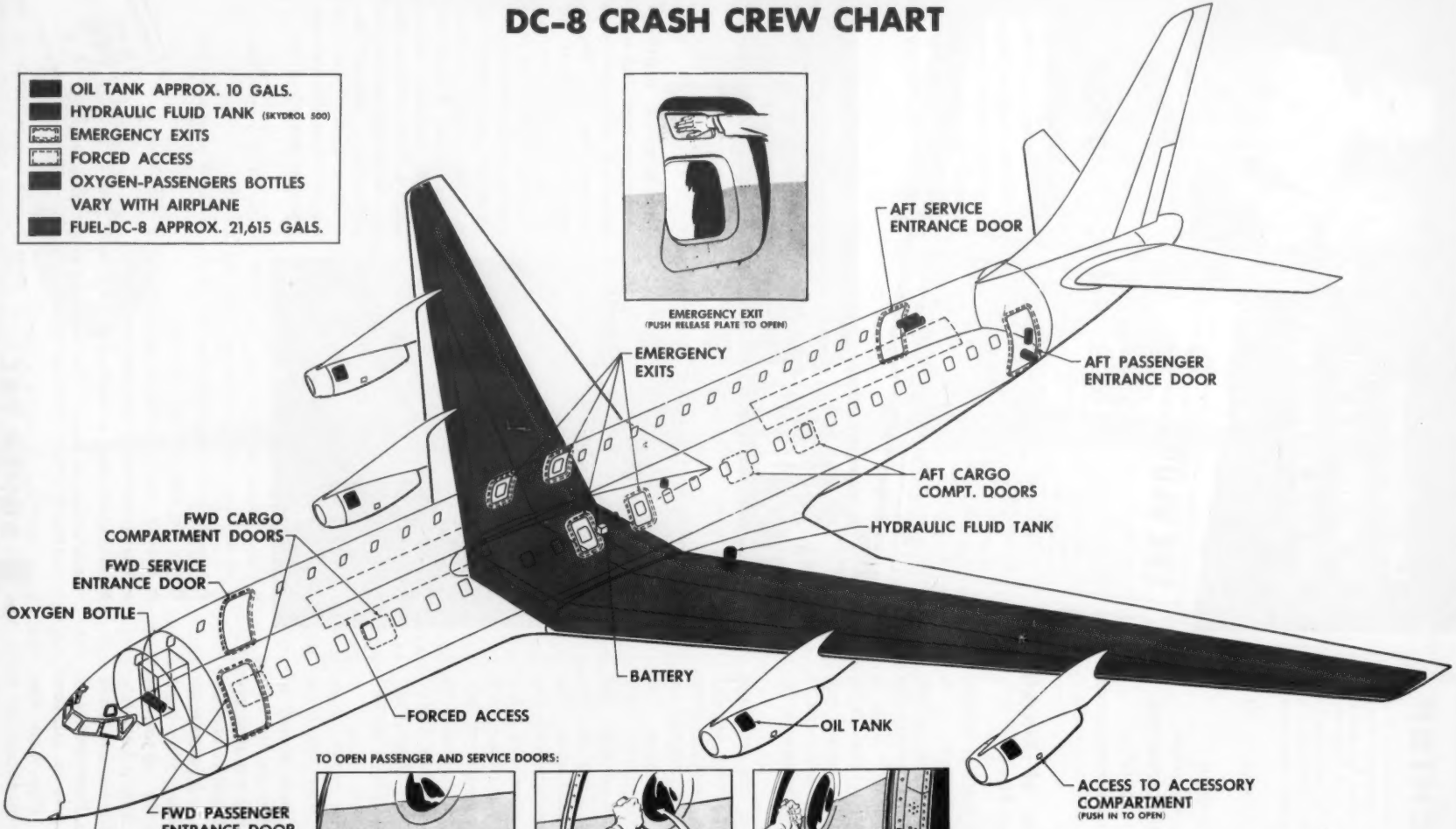

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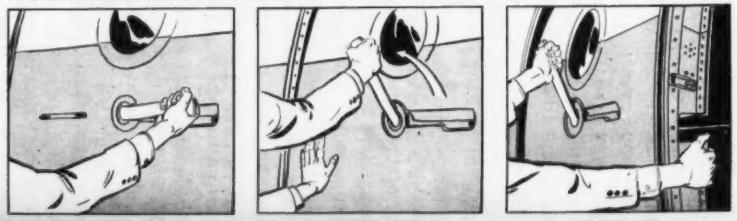

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THE

WHEN YOU RE

Aircraft Identification Chart

THIS month, unfortunately, we must reproduce in only one color the chart of the DC-8 jet-powered passenger aircraft shown at left. Actually, the chart, prepared and distributed in 1959 by Douglas Aircraft Company, Inc., Santa Monica, California, features red, green, yellow and black and measures 37 by 26 inches.

In the legend at upper left of the chart, the 10-gallon oil tanks are identified by solid yellow. These tanks are the dark squares in the front of each engine. The hydraulic fuel tanks are identified by solid green. One is the black cylinder just back of the wing and the other is the small cylinder between the emergency exits in the center of the plane.

The oxygen passenger bottles are crosshatched green. In this chart, one is behind the pilot's cabin and four are near the aft service and passenger entrance doors. The fuel, more than 21,000 gallons, is carried in the wings, and is identified on the original chart by crosshatched red.

FIRE SERVICE MEETINGS

California:

June 17: Marin County Association of Fire Departments, monthly meeting, Kentfield. Contact W. H. Lane, secretary, 74 Vendola Drive, San Rafael, California.

Colorado:

June 15–18: Colorado State Firemen's Association, 43rd anniversary, convention, fire school and tournament, Colorado Springs. Contact Art Becker, secretary, 2224 South Stuart Street, Denver.

Delaware:

June 28: Sussex County Firemen's Association, monthly meeting. Contact W. J. Quillen, secretary, Millville, Delaware.

Florida:

June 9, 10: Southeastern Fire Chiefs' Association, 1960 convention, Jacksonville, Florida. Contact Chief Frank Kelly, chairman, Jacksonville, Fla.

Iowa:

June 20, 21: Professional Fire Fighters, annual convention, Hotel Fort Des Moines, Des Moines.

June 28–30: Missouri Valley Association of Fire Chiefs, annual conference, Fort Des Moines Hotel, Des Moines. Contact Chief Paul A. Soener, secretary, Fire Department, Independence.

Maryland:

June 22–24: Maryland State Firemen's Association, 68th annual convention, Ocean City. Contact Floyd Heimer, secretary, Branchville.

Michigan:

June 16–18: Michigan State Firemen's Association, annual convention, Croswell, sponsored by the Sanilac County Firemen's Association. Contact Stirling Garrow, secretary-treasurer, Michigan State Firemen's Association, 816 Oak Street, Port Huron.

Missouri:

June 28–30: Missouri Valley Association of Fire Chiefs, 1960 conference, Fort Des Moines Hotel, Des Moines, Iowa. Contact Chief Paul A. Soener, secretary, Independence, Iowa.

New Hampshire:

June 20–23: New England Association of Fire Chiefs, 38th annual conference, Wentworth-by-the-Sea, Portsmouth. Contact Chief Albert W. Kimball, secretary-treasurer, 25 Leavitt Street, Hingham, Massachusetts.

New York:

June 16–18: Hudson Valley Volunteer Firemen's Association, 71st annual convention, Monticello. Contact Charles M. Fales, secretary, 92 Clove Avenue, Haverstraw.

June 21: Ulster County Volunteer Firemen's Association, regular meeting, Bloomington, N. Y. Contact Fred C. Harder, secretary, 34 Jarrold St., Kingston, N. Y.

Nova Scotia:

July 10-13: Maritime Fire Chiefs' Association, 1960 convention, Glynmill Inn, corner Brook, Newfoundland. Contact James A. Gray, secretary, P.O. Box 519, St. Stephen, New Brunswick.

(Continued on next page)

WANT HELP IN PLANNING YOUR EMERGENCY RESCUE UNIT?

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UNDERWRITERS' APPROVED FIRE DETECTORS • PANELS • BELLS • HORNS

Fire Service Meetings

(Continued from page 27)

Ohio:

June 14: Summit County Firemen's Association, monthly meeting, Macedonia, Ohio. Contact Harry Harris, secretary, 998 Kubler St., Akron 12.

June 25: Central Western Firemen's Association, 30th annual convention, Union City (East Side Fire Department, Union City, Indiana. Contact Chief Roger O'Donnell, president, 12 N. High Street, Covington.

June 30: Stark County Firemen's Association, monthly meeting, Strasburg, Ohio. Contact Gene Kay, secretary, 2036 29th St., N.E., Canton, Ohio.

Oklahoma:

July 2–3: Reunion of old graduates and students of Oklahoma State School of Fire Protection and others connected with Stillwater Fire Department. Contact Chief W. C. Buck, Campus Fire Station, Stillwater.

Oregon:

June 19–22: Oregon Fire Chiefs' Association, Oregon Volunteer Firemen's Association and Oregon Rural Fire Protection Districts Association, joint annual conference, Sensider Hotel. Contact Chief E. L. Smith, Eugene Fire Department, Central Fire Station, Eugene.

June 24: Polk-Yamhill Firemen's Association, monthly meeting, Monmouth, Oregon. Contact Glenn Wick, secretary, 209 Hayter St., Dallas, Oregon.

Pennsylvania:

June 12–18: Allegheny County Volunteer Firemen's Association, 46th annual convention, Sharpsburg. Contact A. H. Leck, recording secretary, Box 106, McKees Rocks.

June 15: Beaver County Firemen's Relief Association, monthly meeting, Vanport, Pa. Contact W. E. Miller, secretary, 339 Penn. Ave., Rochester.

June 17: Four County Firemen's Association, convention, West Catasauqua. Contact Arthur E. Wieand, president, or J. A. Everitt, secretary, Stroudsburg.

June 21: Perry County Firemen's Association, regular meeting, Ickesburg, Pa. Contact F. L. Fry, secretary, New Bloomfield, Pa.

June 25–28: International Fire Buff Associates, Inc., annual convention, Chester, Pa. Contact Edward J. Gill, secretary, 500 E. 9th St., Chester, Pa.

June 27: Lehigh County Volunteer Firemen's Association, monthly meeting, Emmaus, Pa. Contact Arthur Mohr, secretary, Vera Cruz, Pa.

Rhode Island:

June 14: Woonasquatuckett Valley Firemen's League, monthly meeting, Johnston Hose No. 3 (Manton Fire Sta.). Contact A. F. Rail, secretary, Chopmist Hill Rd., Scituate, R. I.

June 29: Pawtuxet Valley Firemen's League, monthly meeting, Washington Vol. Fire Co. Inc.

Saskatchewan:

June 20–22: Saskatchewan Association of Fire Chiefs, annual conference, Saskatoon. Contact F. O. Howard, secretary-treasurer, Fire Department, Regina, Saskatchewan.

South Carolina:

June 19–21: South Carolina Firemen's Association, state convention, Poinsette Hotel, Greenville. Contact Chief J. E. Poole, Greenville Fire Department.

Washington:

June 22–25: Washington State Association of Fire Chiefs and Washington State Firemen's Association, joint meeting, Port Angeles. Contact Emma L. Ethier, secretary, 3206 E. 125th Street, Seattle.

Wisconsin:

June 20–22: Wisconsin Paid Firemen's Association, 52nd annual convention, Fond du Lac. Contact Bob Madden, secretary, 1240 Wolff Street, Racine.

Have you read the new book offer on page 8 of this issue?

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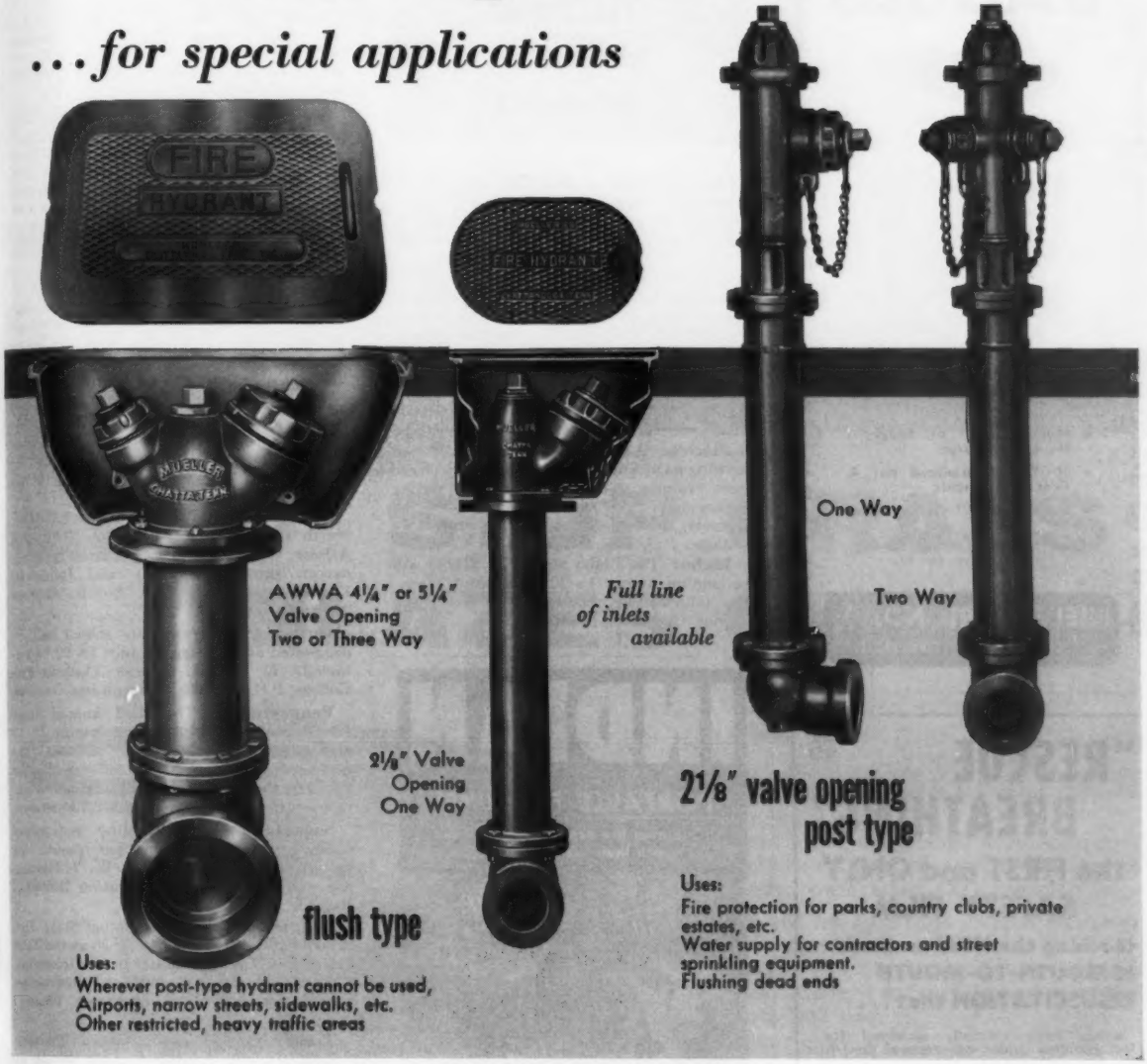

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Firemen's Training in the Months Ahead

Arizona: The Eighth Annual Arizona State Fire School will be held in Phoenix, October 20–22. For information write to Chief Jake Siken, Supervisor of Training, Phoenix Fire Department.

British Columbia: The Fire Marshal's Traveling Instructional Unit will continue instructional classes throughout the Province. For details contact Fire Marshal Basil Nixon, 411 Dunsmuir St., Vancouver 3.

The British Columbia Fire Chiefs' Annual Fire College will be held at Campbell River. For details write to W. A. Oswald, secretary, 7850 Osler Avenue, Vancouver.

Florida: A seminar in arson detection and investigation will be held August 8–12. Resident training classes will be held during September. For details contact W. H. Barnett, superintendent, Florida State Fire College, P.O. Box 785, Ocala.

Idaho: The Idaho State Fire School will be held on August 18–20 at Moscow, Idaho. For information contact Fire Chief Steve Taylor, City Hall, Boise.

INDIAN

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Indiana: The 27th Annual State Fire School will be held September 14–17. A three-day Fire Inspectors' Course will be held October 25–27. For information contact Professor Shelby Gallien, director, Public Safety Institute, Purdue University, Lafayette.

Maryland: The 27th Annual Short Course for Firemen will be held on September 6–9 at the University of Maryland. For details contact Robert C. Byrus, director, Box 85, College Park.

Massachusetts: The second annual Fire Rescue Training School will be held June 25–26 in Ashburnham. For further information contact Chief Joseph F. Schiller, Ashburnham Fire Department, or Lt. Philip C. Whitney, Jr., Ashburnham Fire Department.

Missouri: The Annual Missouri State Fire School will be held at the University of Missouri at Columbia on July 22–24. For information contact W. Bush Walden, administrative assistant in charge of firemanship training, University of Missouri, 10 Lathrop Hall, Columbia.

Ohio: The Seventh Annual Ohio State Arson School will be held September 12–16 at the New College of Law Building, Ohio State University, Columbus. For further information contact Chief Ray Davis, Arson Bureau, Ohio State Fire Marshal's Office, 21 W. Broad Street — 6th Floor, Columbus 15.

Regional fire schools are scheduled for North College Hill, September 24–25, and Athens, October 9. Contact Byrl R. Shoemaker, supervisor, Trade and Industrial Education Service, 220 South Parsons Avenue, Columbus.

Ontario: A regional fire school will be conducted at Sudbury on July 18–22. Contact D. E. Barrett, director, Ontario Fire College, P.O. Box 830, Gravenhurst, Ontario.

Pennsylvania: The 22nd Annual State Fire School will be presented August 15–19 and a three-day course for potential fire service instructors will be offered August 22–24 at the Pennsylvania Fire School. Contact Art Espey, director, Box 631, Lewistown.

Saskatchewan: Traveling instructors conduct four fire schools per month for volunteer firemen. Contact W. J. Carson, fire commissioner, Administration Building, Regina.

Tennessee: The 17th Annual State Fire School will be conducted July 17–22 at the Tennessee Fire Training Center in Murfreesboro. Contact Homer S. Elkins, instructor-coordinator, 215 Chestnut Street, Chattanooga.

Texas: The Texas Firemen's Training School will be conducted July 17–22 at Texas A. & M. College, College Station. Contact Chief Henry D. Smith, Fireman Training, Engineering Extension Service, Texas A. & M. College System, College Station.

Virginia: The South Boston Fire School will be held August 22–26 at South Boston Fire School. For information contact R. Lawrence Oliver, director, South Boston Fire School, P.O. Box 654, Harrisonburg.

Washington: The Annual Fire School will be held June 22–25 at Port Angeles. Contact Assistant Chief Harold Thompson, Fire Department, Port Angeles.

Wisconsin: The Southern Wisconsin and Northern Illinois Firemen's Association 24th Annual Fire School will be held September 18 at Madison, Wisconsin. Contact Herman Pfund, secretary, New Glarus, Wisconsin.

Wyoming: The regional fire school will be conducted at Albin, November 9–13. For information write to Sam Hitchcock, State Department of Education, Capitol Building, Cheyenne.

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Used as mobile pump, booster, or to pump out basements. Supplies two 1½" hose lines with ½" nozzles, or one 2½" line with ¾" nozzle. Handles dirty water without serious damage. Engine available with Automatic Starter if desired.

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3 X D PORTABLE

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With it, you can fight wind-whipped fires *on the move** . . . get them controlled fast! Then, use it as an auxiliary to draft water from ponds to refill your tank. Or carry it down a river bank to get water your truck can't reach.

After a building fire, leave it to pump out the basement while your pumper returns to the station. Let it handle dirty water when necessary — and protect your larger pump.

For extra mobility, capacity and usefulness, you'll find the American 3XD Auxiliary Portable truly valuable . . . yet low in cost!

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FIRE PUMP COMPANY

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Consider the products advertised in this issue.

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this month's *News and New Products*

New Plant for ADT

A new manufacturing and warehouse facility for American District Telegraph Company (ADT) will be built on a 10-acre plot in Clifton, New Jersey. Executive offices will remain in New York City.

Ward LaFrance Truck Corporation announces a premium line of sixteen models of fire apparatus — custom-tailored trucks at a commercial-truck price. Get the facts from their sales office at Grand Central Avenue, Elmira, New York. . . . *Sperti Faraday, Inc.*, Adrian, Michigan, has a new 88-page signal manual (No. 160) free on request — valuable information on fire alarms, paging, signaling of all types for your hospitals, offices, factories and schools. . . . "Paint Your Way to Fire Safety" is the new 12-page, illustrated folder on how fire-retardant paint works and how it is applied. For your free copy of Bulletin No. 100, write to *Albi Manufacturing Company, Inc.*, Rockville, Connecticut.

Two new chemicals, "NO CO Tank Saver," said to eliminate corrosion and rusting of booster tanks, and "Chemtrate" wetting agent are announced by *National Chemsearch Corporation*, 2417 Commerce Street, Dallas 26, Texas. . . . "Superior" fire shutters and "Akbar" steel rolling fire doors (UL labeled) are illustrated and described in the new 36-page catalog offered by *Kinnear Manufacturing Company*, Fields Avenue, Columbus 16, Ohio. . . . "Auto-Gard" UL listed battery switch permits the driver to cut off all current in car or truck and eliminate live wire dangers such as fires, short circuits, smoking wires, continuous horn blowing and safeguards against theft. For literature write to *A. L. Rogers Development Corporation*, 2560 Ocean Avenue, Seaford, Long Island, New York. . . . Eastern headquarters for sales and service of two-way mobile radio has been established at Fair Lawn, New Jersey, by *Motorola Communications and Electronics, Inc.*

Falcon Freon-powered signaling horns in a recent demonstration were loud enough to bring reaction from the totally deaf at Maryland School for the Deaf, Frederick, Maryland. . . . Four sizes of first-aid kits (10, 16, 24 and 36 unit sizes) are described in the new bulletin No. 0401–10 available from *Mine Safety Appliances Company*, 201 North Braddock Avenue, Pittsburgh 8, Pennsylvania.

Complete descriptions of all two-way mobile radio base station equipment available from *Motorola* are contained in a new booklet published by that company. . . . Developed to protect hazards connected with high speed transfer of gasoline and other flammable liquids in fueling and pipeline operations, the *Ansul Chemical Company* 350-pound dry chemical wheeled extinguisher has been awarded a 160-B:C rating, the highest granted by Underwriters' Laboratories. . . . Here is a handy catalog to have — the 24-page multicolor catalog on a wide range of accident preventive markers and signs available from *North Shore Nameplate*, 214-27 Northern Boulevard, Bayside 61, New York. . . . R. G. (Pete) Ashbaugh recently

Addition for American Fire Pump Company

American Fire Pump Company, Battle Creek, Michigan, has completed an addition to its plant which was built in 1956. The company produces the Barton-American line of fire pumps.

became President of *Elkhart Brass Manufacturing Company, Inc.* E. H. Hansen, President since 1943, became Board Chairman of the company.

New Resuscitation Device

Venti-Breather Products, Inc., 725 15th Street, N.W., Washington 5, D. C., announces this "Venti-Breather," a new resuscitation device for use on adults and children. Contact manufacturer for full details.

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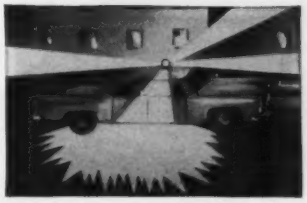

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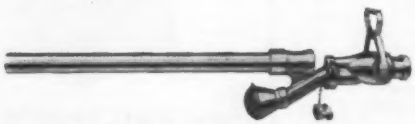

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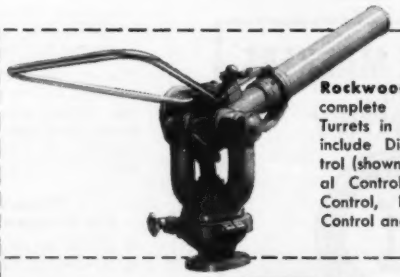

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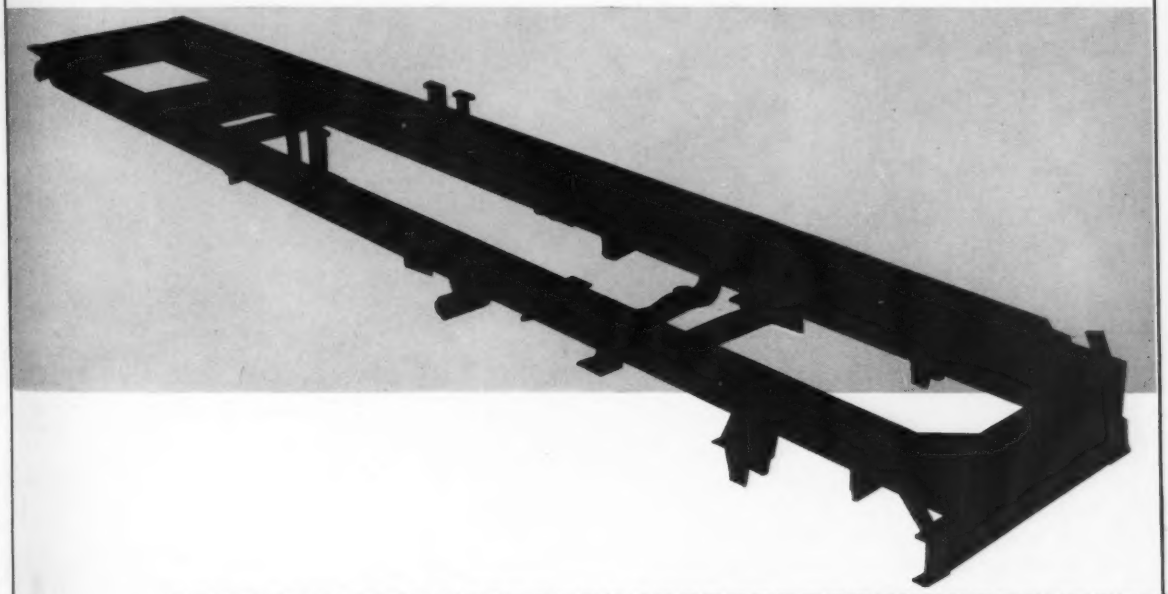

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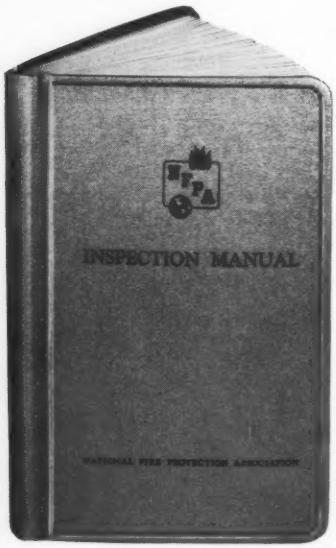

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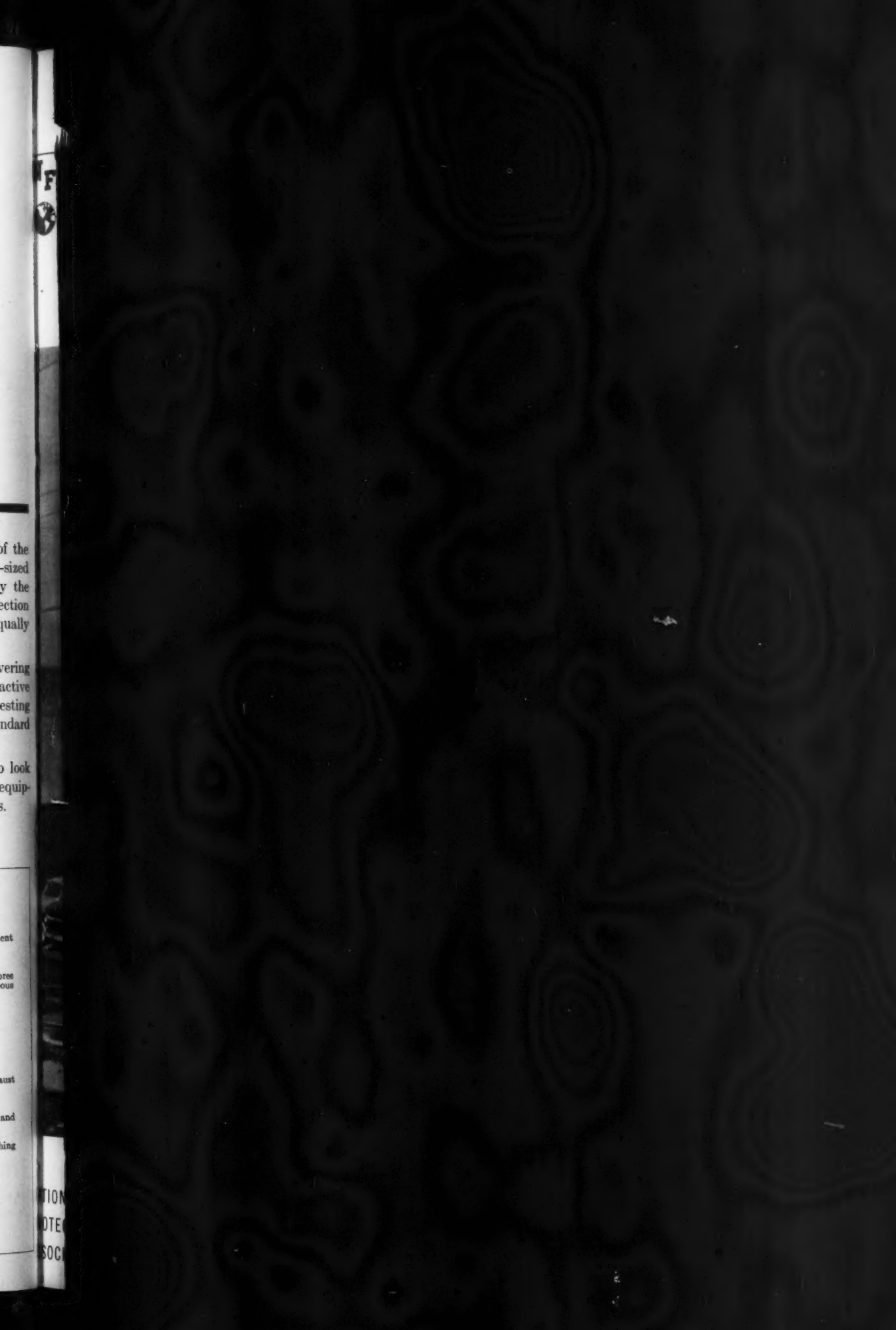
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